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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application: Mersch, Gerhard

Serial No.: 09/931,489

Filed: 08/21/2001

Group Art Unit: 3634

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Examiner: Redman, Jerry E.

For: DOOR MODULE FOR MOTOR VEHICLE DOORS

APPEAL BRIEF

Box AF
Assistant Commissioner of Patents
Washington, D.C. 20231

Dear Sir:

The original brief for this appeal was filed on April 18, 2003. This corrected brief is responsive to the Notice of Non-Compliance mailed July 14, 2003.

Real Party in Interest

ArvinMeritor GmbH is the real party in interest.

Related Appeals and Interferences

There are no related appeals or interferences.

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Status of the Claims

Claims 7-21 stand finally rejected under 35 U.S.C. §103.

Status of Amendments

There are no unentered amendments.

Summary of the Invention

Powered window lifter units for vehicle doors typically include a power drive unit and control electronics. This invention provides a manner of securing the drive unit and control electronics in place within a door module assembly that minimizes the number of parts and simplifies the assembly process. (Paragraph 3, page 1).

In one example embodiment a drive unit 10 is secured to a housing 11 to which control electronics 13 are secured. The housing 11 is open on one side and the wall 12 of the system carrier 2 closes off the housing 11 when the housing 11 and the drive unit 10 are secured to the system carrier 2. (Paragraph 13, page 5).

Advantageously, when the housing 11 is secured in place on the system carrier 2, electrical contacts are made simultaneous with the positioning of the housing portion 11 against the system carrier wall 12. (Paragraph 14, page 5-6, and paragraph 16, page 6).

In the disclosed examples, a seal 22 prevents any contaminants or moisture from entering the housing where the control electronics are secured. (Page 6, paragraph 18).

Independent claim 7 recites a door module including a housing that contains the electric drive unit and the control electronics. The housing of claim 7 has a first portion

that at least partially encloses the control electronics. A portion of the system carrier cooperates with the first portion of the housing to completely enclose the control electronics.

Dependent claim 11 adds plug-in contacts for communicating power and signals that are supported on the portion of the system carrier and cooperating contacts supported on the first housing portion, which are coupled with the control electronics. The plug-in contacts and the cooperating contacts are engaged in an electrically conductive manner when the first housing portion is secured to the corresponding portion of the system carrier.

Independent claim 16 includes an electrical connector supported by a support plate. A housing contains at least one electrically conductive element and at least partially encloses the conductive element. The housing cooperates with the support plate to completely enclose the conductive element and the conductive element is electrically coupled with the electrical connector supported on the support plate when the housing is secured to the support plate.

Independent claim 19 recites a method of assembling a door module assembly that includes making an electrical connection between control electronics and an electrical connector when a housing is secured to the support plate to completely enclose the control electronics.

Issues

Whether the final rejection under 35 U.S.C. §103 is proper when there is no motivation to make the proposed combination because it provides no benefit and defeats one intended feature of the primary reference.

Grouping of Claims

Claims 7-10 and 12-15 stand or fall together for purposes of this appeal.

Claim 11 stands alone for purposes of this appeal.

Claims 17 and 18 depend from claim 16. Claims 16-18 stand or fall together, but separately from all other claims, for purposes of this appeal.

Claims 20 and 21 depend from claim 19. Claims 19-21 stand or fall together, but separately from all other claims, for purposes of this appeal.

Argument

INTRODUCTION

None of the claims are obvious because there is no motivation for making the proposed combination and, therefore, no *prima facie* case of obviousness. Without a benefit to making a proposed combination, there is no motivation. Additionally, even the combination proposed by the Examiner is not the same as many of Applicant's claims.

THE CITED REFERENCES

A. United States Patent No. 6,185,872 (“the *Seeberger* reference”)

The *Seeberger* reference discloses a vehicle door structure that includes a support plate 3 that completely covers a cut-out section in an inner door panel (not shown) and a seal provided on the circumferential fastening flange 30. The support plate 3 and seal on the flange 30 “ensure a hermetic separation of the hollow cavity enclosed by the door body into a dry space and a wet space.”

The *Seeberger* reference includes a drive control unit 9 that is supported in a housing (column 5, line 34) and mounted on the “dry space side” of the support plate 3. The drive control unit includes switches 92, 93 that are used by an individual within the vehicle (i.e., on the other side of the lining 5a) for controlling the position of a window, for example. The switches 92 and 93 extend through openings 93a in the lining 5a.

The *Seeberger* reference repeatedly stresses that the control unit 9 is on the dry side of the support plate 3. Column 4, line 41, for example states that there is a “hermetic separation” and line 44 states that “a seal provided on the circumferential fastening flange 30 prevents dampness from entering.” The *Seeberger* reference repeatedly refers to the dry space side and, therefore, has isolated the drive control unit 9 from moisture by virtue of placing it on the dry space side of the support plate 3.

This is important to note because the Examiner’s proposed motivation for making the applied combination is to use “a contained housing [that] protects the motor drive and electronics from moisture thereby preventing rust or a short in the electronics.” (First Office Action). One difficulty with the Examiner’s motivation is that the *Seeberger*

reference has already addressed that issue and there is nothing in the *Seeberger* reference that suggests any need for additional or modified measures in this regard.

B. United States Patent No. 4,471,251 (“the *Yamashita* reference”)

The *Yamashita* reference is cited by the Examiner as disclosing a door module having a cavity and cover that contains the electrical drive motor and the control electronics. The *Yamashita* reference discloses a casing for a DC motor 11 that assembles the motor when the casing is put together. There is no discussion of control electronics within the *Yamashita* reference.

THE REJECTION UNDER 35 U.S.C. §103 IS IMPROPER

The Examiner has rejected claims 7-21 under 35 U.S.C. §103 as being unpatentable over the *Seeberger* reference in view of the *Yamashita* reference. The Examiner contends that it would have been obvious to provide the arrangement of the *Seeberger* reference with a housing as taught by the *Yamashita* reference.

A. There Is No *Prima Facie* Case of Obviousness And Claims 7-10 and 12-15 Are Allowable.

There would be no benefit to adding the housing of the *Yamashita* reference to the arrangement of the *Seeberger* reference, which already places the drive control unit 9 in a housing (column 5, line 34) on the “dry space side” of the support plate 3. It is axiomatic that there must be a motivation to make a combination to establish a *prima facie* case of obviousness. Without any benefit to making the proposed combination, there is no motivation and no *prima facie* case of obviousness.

The Examiner's reasoning for finding motivation to add the arrangement of *Yamashita* to that of the *Seeberger* reference is to protect the motor drive and electronics from moisture or "other elements such as dust and particles." (Final Office Action).

Additionally, the Examiner contends, "It is well known that seals in the upper belt line of an automobile door cannot prevent all moisture from entering the door." Applicant disagrees and the Examiner must provide evidence to support this contention or withdraw the argument. Moreover, the Examiner must demonstrate that the explicit teachings of the *Seeberger* reference are incorrect. The *Seeberger* reference unequivocally teaches a "hermetic" seal and moisture isolation.

There is nothing with the *Seeberger* reference that indicates that it has any need for a different mounting configuration or that adding a cavity-like structure as taught by the *Yamashita* reference would somehow be beneficial. There is nothing within the *Seeberger* reference to indicate that it is in any need for modification.

As noted, the *Seeberger* reference already places the drive control unit 9 in a housing (column 5, line 34). Adding a housing arrangement as taught by *Yamashita*, therefore, would be redundant at best and provides no benefit. Where there is no benefit to making the combination, there is no *prima facie* case of obviousness.

Further, the *Seeberger* reference repeatedly teaches that the drive control unit 9 is on the dry space side of the support plate 3. As such, that unit is already isolated from any moisture or contaminants and, therefore, there would be no benefit to adding a housing to allegedly protect the drive control unit from such elements. The only basis for such reasoning must be hindsight, which of course is not permitted to establish a *prima facie* case of obviousness.

An independently dispositive reason why there is no motivation is that the proposed combination defeats an intended purpose of the teachings of the *Seeberger* reference. If a cover as taught by *Yamashita* were included in the *Seeberger* reference, the switches 92 and 93 would no longer be able to protrude through the openings 93a and, therefore, the intended function of those switches would be defeated. If the switches 92 and 93 are not accessible by an individual within the vehicle, their function is lost. Where a proposed combination defeats an intended purpose or function of the teachings of a primary reference, there is no motivation for making the combination and no *prima facie* case of obviousness.

None of the claims can be considered obvious over the improper combination for the above-stated reasons.

B. Claim 11 Is Allowable

Claim 11 is not obvious because the Examiner's proposed combination does not establish a *prima facie* case of obviousness. The combination cannot be made because there is no motivation as discussed above.

In addition to the reasons why claim 7 is allowable, Claim 11 recites plug-in contacts and cooperating contacts that are supported on the system carrier and the first housing portion, respectively. The plug-in contacts and cooperating contacts are "engaged in an electrically conductive manner when the first housing portion is secured to the portion of the system carrier."

Even if the Examiner's combination were proper, the result is not the same as the invention of claim 11. Neither the *Seeberger* reference nor the *Yamashita* reference anywhere disclose or suggest cooperating contacts and plug-in contacts that are

electrically engaged when a housing portion and a system carrier are secured together. The inventive arrangement of Claim 11 allows for simultaneously mounting the structures together to enclose the electronics and to establish an electrically conductive connection with the electronics. This is nowhere shown or suggested within the cited references. Accordingly, claim 11 is allowable because the Examiner's proposed combination cannot satisfy the limitations of the claims.

C. Claims 16-18 Are Allowable

As discussed above, there is no *prima facie* case of obviousness because there is no motivation for making the proposed combination.

Additionally, claim 16 recites an electrical connector and at least one electrically conductive element that are "electrically coupled" when the housing is secured to the support plate. Neither reference discloses that in any form. Even if the Examiner's proposed combination could be made, the result is not the same as what is claimed. There is no teaching of establishing an electrical connection when a housing is secured to another structural member that completes the housing as recited in claim 16.

D. Claims 19-21 Are Allowable

The pending method claims are allowable because there is no *prima facie* case of obviousness as discussed above.

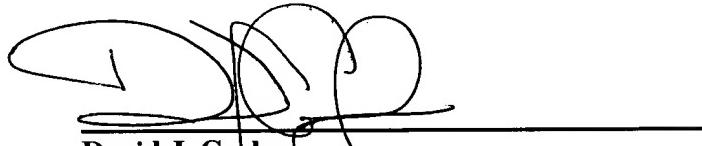
Additionally, claim 19 includes the step of "securing the housing to the support plate to thereby completely enclose the control electronics and to make an electrical connection between the control electronics and the electrical connector." This is nowhere shown or suggested within the cited references. Therefore, even if the combination could be made, the result is not the same as what is claimed.

CONCLUSION

None of the claims are obvious. There is no motivation for making the proposed combination because it provides no benefit and defeats an intended function of the primary reference. The Examiner's stated "motivation" ignores and contradicts the express teachings of the primary reference. Further, the improper combination fails to teach positively recited limitations of at least some of the pending claims. The rejection under 35 U.S.C. §103 must be reversed.

Respectfully solicited,

CARLSON, GASKEY & OLDS, P.C.

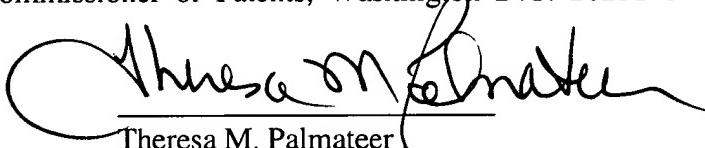


August 8, 2003
Date

David J. Gaskey
Registration No. 37,139
400 W. Maple, Suite 350
Birmingham, MI 48009
(248) 988-8360

CERTIFICATE OF MAIL

I hereby certify that the enclosed **Appeal Brief (in triplicate)** is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Box AF, Assistant Commissioner of Patents, Washington D.C. 20231 on August 8, 2003..



Theresa M. Palmateer

APPENDIX OF CLAIMS

7. A door module for use in a motor vehicle door, comprising:
 - a system carrier;
 - a window lifter unit supported on the system carrier;
 - an electric drive unit associated with the window lifter unit;
 - control electronics for controlling the electric drive unit; and
 - a housing that contains at least the electric drive unit and the control electronics, the housing having a first portion at least partially enclosing the control electronics, a portion of the system carrier cooperating with the first portion of the housing to completely enclose the control electronics.
8. The door module of claim 7, wherein the window lifter unit includes guide members and cables that are driven by the electric drive unit, one end of the cables connected to drivers for a window glass, the other end of the cables applied to a cable drum that is driven by the drive unit.
9. The door module of claim 7, wherein the system carrier comprises a plate.
10. The door module of claim 7, including a seal supported on one of the first housing portion or the portion of the system carrier enclosing the control electronics, the seal sealing an interface between the first housing portion and the portion of the carrier when the portions are secured together.

11. The door module of claim 7, including plug-in contacts for communicating power and signals supported on the portion of the system carrier and cooperating contacts supported on the first housing portion and coupled with the control electronics such that the plug-in contacts and the cooperating contacts are engaged in an electrically conductive manner when the first housing portion is secured to the portion of the system carrier.

12. The door module of claim 7, including fasteners that secure the first housing portion to the portion of the system carrier.

13. The door module of claim 12, wherein the fasteners comprise screws.

14. The door module of claim 7, including a locking projection supported by the system carrier that engages a cooperating portion of the first housing portion to secure the first housing portion against the portion of the system carrier.

15. The door module of claim 14, including two opposing locking projections that are resilient for snappingly engaging cooperating surfaces on the first housing portion.

16. A door module assembly for use in a vehicle door, comprising:
 - a support plate having a contour adapted to fit within a vehicle door structure;
 - at least one conductor member adapted to convey an electrical signal having one end;
 - an electrical connector coupled with the end of the conductor and supported by the support plate; and
 - a housing containing at least one electrically conductive element and at least partially enclosing the conductive element, the housing cooperating with the support plate to completely enclose the conductive element and wherein the conductive element is electrically coupled with the electrical connector supported on the support plate when the housing is secured to the support plate.

17. The assembly of claim 16, including a seal that seals off an interface between the housing and the support plate.

18. The assembly of claim 16, including a plurality of conductors and a plurality of connectors associated with the conductors, the connectors being supported by the support plate and a corresponding plurality of the cooperating connectors associated with the control electronics within the housing.

19. A method of assembling a door module assembly having a support plate and a housing that at least partially houses control electronics for a window drive unit, comprising the steps of:

supporting at least one electrical connector associated with at least one conductor on the support plate; and

securing the housing to the support plate to thereby completely enclose the control electronics and to make an electrical connection between the control electronics and the electrical connector.

20. The method of claim 19, including securing the housing to the support plate using screws.

21. The method of claim 19, including securing the housing to the support plate by snapping the housing into position against the support plate.